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EXAMINER	
DOYLE, J.	
ART UNIT	PAPER NUMBER
332	4

DATE MAILED: 01/02/90

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

This application has been examined  Responsive to communication filed on \_\_\_\_\_  This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), \_\_\_\_\_ days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- 1.  Notice of References Cited by Examiner, PTO-892.
- 2.  Notice re Patent Drawing, PTO-948.
- 3.  Notice of Art Cited by Applicant, PTO-1449
- 4.  Notice of informal Patent Application, Form PTO-152
- 5.  Information on How to Effect Drawing Changes, PTO-1474
- 6.  \_\_\_\_\_

Part II SUMMARY OF ACTION

1.  Claims 1-36 are pending in the application.

Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

2.  Claims \_\_\_\_\_ have been cancelled.

3.  Claims \_\_\_\_\_ are allowed.

4.  Claims 1-36 are rejected.

5.  Claims \_\_\_\_\_ are objected to.

6.  Claims \_\_\_\_\_ are subject to restriction or election requirement.

7.  This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.

8.  Allowable subject matter having been indicated, formal drawings are required in response to this Office action.

9.  The corrected or substitute drawings have been received on \_\_\_\_\_. These drawings are  acceptable;  not acceptable (see explanation).

10.  The  proposed drawing correction and/or the  proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_ has (have) been  approved by the examiner.  disapproved by the examiner (see explanation).

11.  The proposed drawing correction, filed \_\_\_\_\_, has been  approved.  disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections **MUST** be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.

12.  Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has  been received  not been received  been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.

13.  Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14.  Other

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Claims 11-13,20,23,24,26 and 33-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The "control language means" lacks antecedent basis in claim 20.

The use of trademarks in claims is improper, as they render the definition of the elements to which they relate indefinite. See MPEP 6 08.01(v).

As to claims 33-35, what does "in lockstep" mean?

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. 112, first paragraph, as failing to adequately disclose how the pace is controlled by both the teacher and the student. Does the program move to the next question when the student enters a response before the time period expires? Also, what exactly does "in lockstep" mean. Does it mean substantially simultaneously or consecutively? For purposes of the prior art rejections in this office action, "in lockstep" has been interpreted as substantially simultaneously.

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The use of trademarks has been noted in this application. They should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless-

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one (1) year prior to the date of application for patent in the United States.

Claims 1-9,14-16,18,21 and 27-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Rohloff et al.

Rohloff discloses a teaching system comprising instructor station LS from which an instructor can activate programs (series of questions) to be transmitted and loaded onto student stations ~~SS1-SS3~~. The system includes a central processor having stored programs, correct answers to questions stored in memories 41-43 and comparator 71 to compare actual student responses with the correct answers. In individual teaching mode, students can respond to questions at their own pace and in any sequence.

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However, the instructor can also set the system in class teaching mode, wherein a timer 60 limits the time allowed for each student to enter a response for each question. In class mode, students must respond to questions in a sequence controlled by the instructor.

Display indicator means  $A_R$  and  $A_F$  are provided at each student station to display information (whether the student's response is correct or incorrect) to student.

Network means and network controllers 161,261,262,etc. are provided to transmit information between the student stations, central processor and instructor station.

As to claims 4-6,16 and 18, see, for example, col. 19, lines 11-25 of Rohloff. As to claim 18, note the use of a switch is a computer-responsive language as broadly claimed.

As to claim 9, Rohloff provides student memories 11-13,21-23 and 31-33 to store student responses.

As to claim 14, see col. 10, lines 50-57.

As to claim 21, note col. 10, lines 50-57.

As to claims 30-35, see col. 14, lines 6-17.

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be

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patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 11-13,17-20,23,24,26, and 36 are rejected under 35 U.S.C. 103 as being unpatentable over Rohloff et al.

To implement the system of Rohloff, it would have been obvious to utilize well known computers as a central processor and further to use well-known commercial database software, networks, and operating systems.

As to claims 18 and 19, it would have been obvious to enable input of test format and answers by means of a traditional computer language, whether assembly language or a higher level language.

As to claim 36, to replace the LED displays 130,230,330 of Rohloff with a liquid crystal display or other well-known, conventional alternative digital display means would have been obvious to one of ordinary skill in the art.

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Claims 10 and 22 are rejected under 35 U.S.C. 103 as being unpatentable over Rohloff in view of Griffin (cited by applicant on page 3 of the specification).

In Rohloff's system, all response information is stored in correspondence with a student station. However, Rohloff apparently does not disclose any means of identifying which student is at which station. Griffin discloses a computer teaching system similar to that of Rohloff having the added feature of a logon (signing on) mode which is used to record roll and attendance and to generate a seating chart. To apply the teachings of Griffin to the Rohloff system by providing the Rohloff system with a sign-on capability to identify the student at each station to record roll, attendance and seating charts would have been obvious to one of ordinary skill in the art.

Claims 1,4-10,14-22,25 and 27-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Griffin et al cited by applicant.

Griffin discloses a computer classroom system comprising instructor's CRT screens and keyboards, main processor 10, student stations 22 (see Fig. 2), and network means to transmit information from the instructor stations to the student stations via the main processor. The instructor can select from a plurality of menu choices (see Fig. 4) the mode of the system. In

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"SIGN ON" mode, students enter their names and perhaps student identification numbers from which the system records roll and attendance and generates a seating chart. In the "ADMINISTER A TEST" mode, the instructor can load onto the system a test format consisting of a sequence of inputs (test question numbers and corresponding answers). The question number appears in position 35 of display 24 at the student station. The student enters an answer to the question corresponding to that number from the keyboard. These responses are then compared with the correct answers stored on the system. As to analysis and display of the student responses, see col. 8, lines 46-68 and Fig. 10.

As to claim 4, note col. 6, lines 66-68 and col. 7, lines 1-30.

As to claim 5, note the instructor can select the particular test from a plurality of tests in memory.

As to claim 7, Griffin's system generates a display and analysis of the responses, including the question numbers (sequence of input) to which each response corresponds.

As to claim 14, the Griffin system does not appear to place any restriction on when the instructor can view and analyze the responses.

As to claim 15, analysis of responses in Griffin's

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system is according to question type, which in Griffin's system happens to be multiple choice.

As to claim 16, see col. 11, lines 46-51. As to claim 17, note Fig. 4.

As to claim 20, it is not clear what "the control language means" is, but note that Griffin's system is menu-driven.

As to claim 21, note col. 8, lines 46-50.

As to claim 22, note col. 3, lines 64-66.

As to claims 29-31, see col. 7, lines 31-68. As to claim 32, see col. 3, lines 9-46.

As to claim 34, see col. 7, lines 31-68.

Claims 11-13,23,24,26 and 36 are rejected under 35 U.S.C. 103 as being unpatentable over Griffin et al.

As to claims 11-13,23,24 and 26, to use conventional and well-known computers, networks, network controllers and operating systems in the Griffin system would have been obvious.

As to claim 36, to replace LED display 24 of Griffin with a well-known alternative equivalent display would have been obvious.

Claims 2,3 and 33-35 (alternatively) are rejected under 35 U.S.C. 103 as being unpatentable over Griffin et al. in view of Soviet document 0736158 or Rohloff et al.

Griffin does not disclose any means to enable the



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teacher to control the pace of the sequence of input. However, Soviet document 0736158 and Rohloff et al. teach the use of such means in computer teaching systems. To apply the teachings of Soviet document 0736158 or Rohloff et al. by incorporating into the Griffin device a timer device which the instructor can use to set the maximum time allowed for each question would have been obvious.

As to claims 33-35, even if the claims are interpreted to mean that all students in the group receive the same question at the same time, incorporation of a timer by which the instructor can set the maximum time for each question rather than for the entire test into Griffin's system in view of the teachings of Soviet document as discussed above would effect this result.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shapiro and Larochelle disclose interface between the instructor and one individual or groups at a time.

The Friedman et al. patent discloses a teaching system with automatic grading means.

Ferris - see col. 2, lines 2-5.

Gray - see col. 1, lines 70-72 and col. 2, lines 1-57.

Brittan discloses a calculator for use by teachers

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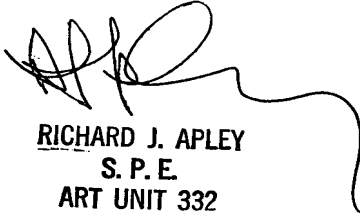
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to convert numeric scores into letter grades.

Any inquiry concerning this communication should be directed to Jennifer Doyle at telephone number 703-557-3125.

*JD 12/27/89*  
J. Doyle:lf  
12-15-89

  
RICHARD J. APLEY  
S. P. E.  
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